



**Department of  
Environmental Protection  
Bureau of Land & Water Quality Feb.2000**

**O&M Newsletter**

**A monthly newsletter for wastewater discharge licensees, treatment facility operators and associated persons**

***For Practice***

1. The jar test is used to determine the proper dosage for which chemical?
  - a. chlorine for disinfection
  - b. activated carbon for absorption of organic chemicals
  - c. polymer for sludge coagulation.
  - d. lime for pH control.
2. Which of the following is most resistant to disinfection?
  - a. Fecal Coliform
  - b. Salmonella
  - c. Protozoa
  - d. Spores
3. An operator who normally wastes 1000 gallons of sludge with a concentration of 4% is now able to pump sludge with a 5% concentration. How many gallons should be pumped to remove the same amount of sludge solids?
  - a. 500 gallons
  - b. 800 gallons
  - c. 1200 gallons
  - d. 1000 gallons
4. You notice a sour, septic odor coming from your secondary clarifiers and when you examine the return sludge, it is black. What would you do to fix this problem?
  - a. increase the return rate to reduce the sludge detention time in the clarifiers.
  - b. reduce the return rate to prevent septic sludge from harming the aeration basins.
  - c. increase the number of times the clarifiers are cleaned.
  - d. do nothing, this is a normal operating condition.

**UPCOMING TRAINING  
COURSES**

February 13, 2001 in Ellsworth - Onsite Installers Workshop - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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February 14, 2001 in Augusta - Mechanical Seals - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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February 14, 2001 in Whitneyville - Proprietary Devices - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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February 15, 2001 in Presque Isle, ME – Electric Motors: Types, Installations & Maintenance - sponsored by MRWA, (207) 729-6569 - Approved for 4 hours.

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February 20, 2001 in Augusta - Onsite Installers Workshop - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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February 22, 2001 in Portland - Advanced Septic System Technologies - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

February 26, 2001 in East Vassalboro, ME –  
Applied Hydraulics - sponsored by MRWA,  
(207) 729-6569 - Approved for 4 hours.

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February 27, 2001 in Portland, ME – Public  
Contracts and Competitive Bidding -  
sponsored by MRWA, (207) 729-6569 -  
Approved for 5 hours.

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February 28, 2001 in Norway, ME –  
Excavations and Permit Required Confined  
Spaces - sponsored by MRWA, (207) 729-  
6569 - Approved for 5 hours.

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March 1, 2001 in Bangor, ME – Electric  
Motors: Types, Installations & Maintenance  
- sponsored by MRWA, (207) 729-6569 -  
Approved for 4 hours.

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March 5, 2001 in Brewer - Advanced Septic  
System Technologies - sponsored by  
JETCC, (207) 767-2649 - Approved for 6  
hours.

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March 8, 2001 in Presque Isle - Basic  
Chemistry - sponsored by JETCC, (207)  
767-2649 - Approved for 6 hours.

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March 9, 2001 in Brunswick, ME –  
Wastewater Operator Certification Review –  
Class I/II - sponsored by MRWA, (207)  
729-6569 - Approved for 6 hours.

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March 14, 2001 in So. Portland -  
Physical/Chemical Treatment - sponsored by  
JETCC, (207) 767-2649 - Approved for 6  
hours.

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March 14, 2001 in Newport, ME –  
Excavations and Permit Required Confined  
Spaces - sponsored by MRWA, (207) 729-  
6569 - Approved for 5 hours.

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March 14, 2001 in Dover-Foxcroft - Onsite  
Installers Workshop - sponsored by JETCC,  
(207) 767-2649 - Approved for 6 hours.

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March 18, 2001 in Old Orchard Beach, ME –  
Chemical Feed Systems O&M - sponsored  
by MRWA, (207) 729-6569 - Approved for  
3 hours.

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March 19, 2001 in Brunswick, ME –  
Wastewater Operator Certification Review –  
Class III/IV - sponsored by MRWA, (207)  
729-6569 - Approved for 6 hours.

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Mar 20, 27 & Apr 3, 10, 2001 in Augusta -  
Advanced Hydrology - sponsored by  
JETCC, (207) 767-2649 - Approved for 16  
hours.

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March 20, 2001 in Bangor, ME –  
Wastewater Operator Certification Review –  
Class III/IV - sponsored by MRWA, (207)  
729-6569 - Approved for 6 hours.

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March 21, 2001 in Houlton - Onsite  
Installers Workshop - sponsored by JETCC,  
(207) 767-2649 - Approved for 6 hours.

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March 21, 2001 in Belfast, ME –  
Excavations and Permit Required Confined  
Spaces - sponsored by MRWA, (207) 729-  
6569 - Approved for 5 hours.

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March 22, 2001 in Presque Isle - Proprietary  
Devices - sponsored by JETCC, (207) 767-  
2649 - Approved for 6 hours.

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March 22, 2001 in Augusta - Seeded BOD  
w/ Lab Reporting & QA/QC - sponsored by  
JETCC, (207) 767-2649 - Approved for 6  
hours.

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March 24, 2001 in Livermore Falls, ME –  
Chemical Feed Systems O&M - sponsored  
by MRWA, (207) 729-6569 - Approved for  
3 hours.

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March 28, 2001 in Presque Isle, ME –  
Excavations and Permit Required Confined  
Spaces - sponsored by MRWA, (207) 729-  
6569 - Approved for 5 hours.

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March 29, 2001 in Yarmouth - Belt Filter Press - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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April 1, 2001 in TBA – Chemical Feed Systems O&M - sponsored by MRWA, (207) 729-6569 - Approved for 3 hours.

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April 4, 2001 in Ellsworth - Polymer Sealant Repair and Preventive Maintenance Systems - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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April 5, 2001 in Presque Isle - Computer Databases - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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April 11, 2001 in Kennebunkport - Pump Station Control Panels - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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April 19, 2001 in Augusta - Basic Wastewater Treatment ( 2 days) - sponsored by JETCC, (207) 767-2649 - Approved for 12 hours.

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April 24, 2001 in Bangor - Bypass Pumping - How to Avoid the Headaches - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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April 30, 2001 in Bangor, ME – Wastewater Operator Certification Review – Class I/II - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.

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May 1, 2001 in Presque Isle, ME – Wastewater Operator Certification Review – Class I/II - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.

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May 17, 2001 in Waterville - Biosolids - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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May 10, 2001 in Presque Isle, ME – Wastewater Operator Certification Review –

Class III/IV - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.

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May 16, 2001 in Augusta - Hydro Cad - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.

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## Spring Certification Exam Notice

If you are planning to take the exam this Spring, the date for the exam is May 16, 2001. Your applications must be

**postmarked by March 31, 2001.**

Applications that are received by us after April 4, 2001 will be held over until the Fall, 2001 exam. This fall, we had way too many people send in application after the deadline. The rules say “Completed applications with all supporting documentation must be received at least **6 weeks prior** to the examination date.” This allows us to process the applications and order the appropriate number of tests for the exam. Please get your applications in by the deadline!!

## Training Reminder

Please remember that operators who have odd numbered certificates must renew their certification in March of 2001. To renew your certification, you must have 18 contact hours of training since your last renewal. There are many training opportunities available through JETCC, MRWA, NEIETC and other trainers so there is little excuse for not completing your training requirement on time. Any training opportunities that we are aware of are noted in this newsletter every month. **Please Plan Ahead!** Look over the schedule posted in this newsletter and sign up for the courses you need now!!

### **Answers to *For Practice*:**

1. c A jar test helps determine how much polymer is needed to condition sludge to get the best settling and dewatering
2. d Some bacteria can form spores or cysts that are a hard case surrounding the soft cell tissue. It is more difficult for disinfecting chemicals to penetrate this hard shell and so the bacteria are less likely to be killed.
3. b  $1000 \text{ gallons} \times 4\% \text{ solids} = 333.6$  pounds of sludge. At 5% solids this would be 800 gallons.
4. a Increasing the return rates will move the sludge back into the aeration tanks where it can again become aerobic. If there is a great deal of septic sludge in the clarifiers, you may have to increase the aeration, if possible, to bring the sludge back or step up the return rate slowly to make sure the sludge gets properly reaerated.